#### **Educational Directory**

## Continuing Education in Ecosystem Management (CEEM)

#### http://www.umt.edu/ceem

For more information, contact your Regional /State Fuels and Training Specialists . (Approximately 12 Graduate Credits)

CEEM prepares mid-career natural resources professionals to meet the challenges of implementing ecosystem management. Participants gain an understanding of the social, biological and physical elements of an ecosystem and how they interact, and apply this understanding in ecosystem and landscape management. Learning is in an interdisciplinary environment. **The audience is natural resource professionals from all disciplines involved in wildland management.** This highly successful program has been developed in cooperation with USDA Forest Service Regions 2, 3, & 4, the USDI Bureau of Indian Affairs, the Utah Division of Forestry, Fire and State Lands, Colorado State University, Northern Arizona University, and Utah State University.

The CEEM program includes four modules that present basic concepts and methods central to effective ecosystem management. The program is designed to be a fully integrated, interdisciplinary, coverage of ecosystem management; i.e., physical, biological, and social aspects are covered in each module. The progression from module to module is from conceptual to applied.

Participants develop expertise necessary to be leaders in the implementation of ecosystem management. Participants conduct biological, physical and social assessments and successfully synthesize information in their capstone landscape assessment.

#### Module I – Biophysical and Human Dimensions of Ecosystems

(Utah State University, Logan, Utah. Session is usually in October)
This intensive two-week course introduces key biophysical and socio-economic concepts and sets the stage for the entire program through exploration of the important concepts central to ecosystem management and how ecosystem management differs from traditional approaches to the management of natural resources.

#### Module II – Structure and Function of Ecological and Social Systems

(Northern Arizona University, Flagstaff, AZ. Session is usually in January)

This two week module builds upon the concepts introduced in Module I. Specific processes of landscape development will be studied and followed through to establish the relationship of landscape structure to vegetation and watersheds. We will look beyond the basic ecosystem concepts introduced earlier to examine scale and pattern of ecosystems and classification at several scales.

# Module III – Integrated Inventory, Analysis and Assessment of Ecosystems (Colorado State University, Fort Collins, CO. Session is usually in April)

This two week module will develop techniques and skills to assess the bio-physical and socio-political environment. This module builds on concepts and information presented in the first two modules to develop an understanding of measurement, predicting future conditions, and decision-making techniques used in ecosystem management. Skills to be learned in this module will be directly applicable to the development of landscape assessments and plans to implement ecosystem management.

### Module IV – Ecosystem Management (Location and Date TBA)

Participates develop an integrated ecosystem assessment of a landscape unit in a capstone exercise. The assessment is conducted by participants as an interdisciplinary team over a two-week period in the field. Landscapes are nominated by host units (e.g. Forest Service districts, Indian Reservations, state agencies, etc.) in the Central and Southern Rocky and chosen for the exercise based on their spatial scale and the issues that affect the area. The team conducts an inventory of social, biological and physical elements to characterize the current and reference conditions of the landscape. The team evaluates and syntheses information to develop alternative future conditions for the landscape and suggests pathways to these future conditions.

## **Continuing Education in Fuels Management** (CEFM)

(Academic credit will be offered through Utah State University as FRWS 6910, Vegetation, Fuels and Fire Management for 3 Graduate Credits)

For more information, contact your Regional and State Fuels Specialist

Continuing Education in Fuels Management (CEFM) addresses the need for fire and fuels management programs which incorporate realistically projected changes in vegetation, fuels and fire behavior over time. This course prepares managers to analyze and plan such vegetation and fuels management projects and by the completion of the course participants will be able to develop more effective fuels projects. CEFM is based on a hands-on approach to learning and participants will apply a series of tools to inventory fuels and vegetation, predict fire behavior, and predict change in vegetation structure. Participants will inventory a project area and apply concepts and tools to conduct an analysis of current condition and fire risk, and to propose and evaluate alternative fuels treatments. A critical component of the evaluation of alternatives will be an assessment of future conditions including longevity of treatment effects and maintenance activities. By the end of the course the participants will be able to conduct a fuels and vegetation analysis that will support sound management decisions. Participants will 1) set management objectives in terms of fuels, fire behavior and vegetation structure; 2) measure, describe and interpret fuels and vegetation inventories; 3) describe weather conditions for analysis of fire risk and fuels treatments; 4) describe vegetation development and fire behavior for current and future untreated conditions; 5) develop. test and display the effects of alternative vegetation management treatments; 6) evaluate

alternative vegetation treatments and the no action against management objectives; 7) conduct a fuels analysis for a sample project. **Target audience:** Resource management personnel, including Silviculturists, Fire, Fuels, Range and Forest Management. Specialists with responsibilities in planning and implementing vegetation management projects with fuels reduction objectives.

# <u>Continuing Education in Fire Management – F544 Decision Methods for Fire Managers: FPA, Initial Attack, Fuels, Fire Use</u> (3 Semester Hours)

Fresh approaches in fuels management, fire use and initial attack, including the performance-based Fire Program Analysis (FPA) planning system, require that fire practitioners refresh and expand their education and analytic skills. This course gives fire managers and planners the education they need to excel in today's wildland fire decision making environment. Personnel in fire/fuels program management, planning, and budgeting are encouraged to apply. Those preparing themselves for positions of increased responsibility will benefit from this course. Fire Management Officers, AFMOs, Fuels Specialist and planners will find this course especially valuable. Academic credit is offered through Colorado State University as F544 "Decision Methods for Fire Managers" for 3 semester hours. Credits for this course may also count toward the 401 series. Application deadline is November 20, 2004. For more information, contact Dr. Douglas B. Rideout at 970-491-7234 or doug@cnr.colostate.edu

Applications are due in August. Contact your Regional Fuels Specialist and State Office Fuels Specialists for more information.

# Continuing Education in Silviculture Landscape Ecology Module (Offerings will begin in 2005)

Instructional objectives will include principles of landscape ecology, biodiversity, disturbance ecology, sustainability, ecological classification, restoration strategies, understanding "sense of place," linkages between sites, stands and landscapes, and landscape analysis and design. The target audience will include, but not be limited to, fire managers, wildlife and fisheries biologists, fire ecologists, range conservationists, soil and watershed specialists, landscape architects, recreation planners, plant ecologists, botanists and silviculturists.

For educational opportunities and other specific information, please visit our web site <a href="www.fs.fed.us/biology/education">www.fs.fed.us/biology/education</a> or contact the professor in charge. USDA Forest Service personnel can also contact their Regional Continuing Education Coordinator or Shelly Witt, National Continuing Education Program Leader, at 435-753-4838 or email: <a href="mailto:smitt@cc.usu.edu">smitt@cc.usu.edu</a>.

USDA Graduate School: <a href="http://www.grad.usda.gov">http://www.grad.usda.gov</a> or call us toll-free at (888) 744-GRAD. Natural Science and Environmental Studies courses offered. (ask 401 standards subcommittee) Note: Get a list of courses from Graduate School.

Credits from the USDA Graduate School, or equivalent. Only courses in biological Sciences, natural resources, wildland fire management, forestry, or agricultural coursework are creditable towards the 24 semester hours equivalent to a major field of study.

#### Office of Personnel Management (OPM):

http://www.leadership.opm.gov/content.cfm?cat=MFA-CD

**Environmental Policy Issues, Natural Resources Seminar: Policies and Issues, and Watershed Partnerships.** 

The courses must be 300 level and above and earned from accredited schools.

#### **DISTANCE LEARNING PROGRAMS**

#### **The Natural Resources Distance Learning Consortium**

The Natural Resources Distance Learning Consortium, a partnership between the <u>USDA</u> <u>Forest Service</u> and <u>Virginia Tech</u>, provides educational opportunities for those interested in Natural Resources and the management of their use.

All courses are designed to give Forest Service employees, and other public lands and resource recreation professionals, the latest information on philosophy, theory, law, regulation, policy and research results and findings to maintain or increase professional competencies. Courses are divided into three series: <a href="Natural Resource Foundations">Natural Resource Foundations</a>, Wildland Recreation, and Natural Resource Management.

For more information on the conference or and the Virginia Tech graduate program contact Dr. David Trauger at <a href="mailto:dtrauger@vt.edu">dtrauger@vt.edu</a> or (703) 706-8130. Examples include:

#### **Series 1: Natural Resource Foundations »**

- ? Foundations of Federal Land Management
- **» Description:** 3 credits. Acquisition, disposal, reservation, and management of the public domain via the Bureau of Land Management, National Park Service and the USDA Forest Service. Policies, trends, and management needs are examined. Intra— and inter-agency integration of land management programs. Syllabus.
- » Instructor: Gary Evans, gaevans1@vt.edu
- **Enrollment:** Requires a five student minimum to begin. Current enrollment: 3. Register now.

#### » Series 3: Natural Resource Management »

- ? Partnerships and Volunteerism
- **» Description:** 3 credits. Students will develop competencies in the development and direction of community volunteer partnerships and collaborations. Students will explore current volunteer development models, collaboration process theory, and key management areas including: visioning, organizing a partnership or collaboration; creating motivating volunteer positions; recruiting, screening, and interviewing; orientation and training; supervising; evaluation; retention and recognition; group process/facilitation; conflict resolution; risk management; and measuring program effectiveness. Syllabus.
- » Instructor: Cathy Sutphin, cmsutph@vt.edu
- **» Enrollment:** Course either finished or in progress; registration closed.
- » Email me when this course is offered again
- ? Global Issues in Natural Resources

- » **Description:** 3 credits. Use of renewable natural resources has important global economic and environmental consequences. A thorough understanding of the international influences on the world's forest, fisheries, wildlife, and other natural resources will help ensure the healthy, sustainable management and use of these resources, and the continued availability of ecosystem products and services. In particular, this course will enhance know ledge and understanding of the use of the world's living natural resources and the management of related industries. This is a 3-credit hour course that is well suited for those with work experience who wish to extend their job skills and gain a global perspective. **Syllabus**.
- » Instructor: A.L. Hammett, himal@vt.edu
- **» Enrollment:** Registration currently open. Course begins Aug 23, 2004. <u>Register</u> now.

#### ? Modern Wildlife Management

- » **Description:** 3 credits. Focuses on the major concepts of wildlife resource management with modern alternatives and options. With a forest wildlife emphasis to wildlife management fundamentals, the course topics include theory development, wildlife-related enterprises, computer map applications and modeling, strategic studies, a total system paradigm, vertebrate pest damage management, ecotourism alternatives, and a dynamic land-use planning system. Exclusively a distance-learning course with extensive text supplied by the instructor and email-managed assignments and exams. Syllabus.
- » Instructor: Gary Evans, gaevans1@vt.edu
- **Enrollment:** Requires a five student minimum to begin. Current enrollment: 1. Register now.
- ? <u>Public Ecology: Understanding and Managing Human Ecosystems in a Changing World</u>
- **» Description:** 3 credits. By pushing past the exhausted conceptual divisions from the 1980s, which largely divided the more natural science-based "environmental sciences" from the more social science-focused "environmental studies," public ecology should mix the insights of life science, physical science, social science, applied humanities, and public policy into a cohesive conceptual whole." (T. W. Luke, 2001)

Today's environmental challenges (e.g., biodiversity loss, forest fragmentation, climate change, etc.) require us to think in new and innovative ways about the future of life on Earth. Public ecology emerges at the confluence of three major currents shaping the contemporary environmental arena: 1) the need for local communities to coalesce and use local knowledge and local action to address local

concerns; 2) the need for dialogue and collaboration across the many disciplinary and cultural boundaries that divide environmentally concerned scientists, policy-makers, and citizens; and 3) the need for a common vision of nature and human society that encourages people to create healthy human ecosystems and sustainable communities at local, regional, and global scales. Public ecology is closely associated with community-based conservation, collaborative natural resource management ("comanagement"), civic environmentalism, and related innovations in environmental knowledge and decision making. Syllabus.

» Instructor: David Robertson, porterdr@vt.edu

**» Enrollment:** Course either finished or in progress; registration closed.

» Email me when this course is offered again

The Institute for Distance & Distributed Learning provides leadership, coordination, management, and support to the distance and distributed activities at Virginia Tech. The Institute for Distance & Distributed Learning provides leadership, coordination, management, and support to Virginia Tech's distance and distributed learning efforts.

#### **State**

#### Arizona

Northern Arizona University (Flagstaff, Arizona) <a href="http://www.nau.edu/~envsci/CONECO/index.htm">http://www.nau.edu/~envsci/CONECO/index.htm</a>

The Conservation Ecology Graduate Certificate program at NAU provides a means for early- and mid-career professionals to gain exposure and competence in the theory and practice of conservation ecology. The program is designed for environmental professionals who wish to briefly return to academia to upgrade or refine their skills in interdisciplinary conservation sciences. These skills may then be put to use through work for government agencies, for tribal governments, or for non-profit and for-profit stewardship organizations. The program brings together conservation-oriented coursework in Forestry, Biological Sciences and Environmental Sciences, with support from the non-academic interdisciplinary Center for Sustainable Environments. The 18 credit-hour certificate program is administered by the Center for Environmental Sciences and Education. The program focuses on field research, habitat restoration, endangered species recovery, and conservation management with an emphasis on human dimensions of landscape-level and biological conservation

The Master of Science in Environmental Sciences and Policy <a href="http://www.nau.edu/text/dept\_index.shtml">http://www.nau.edu/text/dept\_index.shtml</a>

The School of Forestry offers a unique undergraduate degree in Forestry consisting of an interdisciplinary, team-taught immersion curriculum. Our academic programs are known

for their hands-on experience learning approach, their focus on the environment and personalized attention from faculty. Located in one of the most ecologically diverse and environmentally significant areas of the country, the School's programs are highly stimulating and challenging. The School is housed in a new modern building with outstanding teaching and computer facilities. A small, highly dedicated staff of research professionals complements the faculty. http://www.for.nau.edu/

#### Additional web enhanced courses

<u>FOR230</u>	Multicultural Perspectives on Environmental Mgt
FOR240	<b>Human Dimensions of Conserving Biodiversity</b>
<u>FOR250</u>	Arizona Forests and Wildlife
FOR255	International Wildlife Issues
FOR380	Ecological Restoration Principles
FOR382	Ecological Restoration Applications
FOR/GGR	Environmental Hydrology
<u>340</u>	
FOR479	Ecosystem Ecology
FOR498	Senior Seminar in Ecosystem Ecology

#### **Graduate web enhanced courses**

FOR504	Current Issues in Wildlife Management
FOR500	<b>Ecosystem Science and Management</b>
FOR521	Forest Soils
FOR/GGR 525	Geographic Information Systems
FOR551	Fire Ecology and Management
FOR580	Ecological Restoration Principles
FOR582	Ecological Restoration Applications
FOR593	Natural Resource Economics
FOR633	Ecological Economics
FOR690	Research Methods
FOR692	Professional Seminar
FOR698	Graduate Seminar in Ecosystem Ecology

#### University of Arizona, Tucson, Arizona

#### **Undergraduate Degrees**

All students earn a Bachelor of Science degree in Renewable Natural Resources with a major in Wildlife, Watershed and Rangeland Resources (WWRR). To specialize in a particular field, students must also select one of the following Options:

- Fisheries Conservation and Management
- Landscape Assessment and Analysis
- Rangeland Ecology and Management
- Watershed Management
- Wildlife Conservation and Management

#### **How to Apply**

For Current Students

#### **Graduate Degrees**

Graduate students can earn M.S. or Ph.D. degrees in Natural Resources with an emphasis in:

- Fisheries Conservation and Management
- Rangeland Ecology and Management
- Natural Resources Studies
- Watershed Management
- Wildlife Conservation and Management

#### California

#### **Students - The CVC Catalog**

The California Virtual Campus Course Catalog provides a listing of more than 4,400 distance courses offered by accredited institutions in California. You can search the catalog in a wide variety of ways. In addition, other resources are available for students, including information on financial aid.

Since the California Virtual Campus does not offer courses directly, specific questions about courses and programs should be directed to each school. Links to campuses are provided in the catalog. Use the link below to start searching the catalog. http://www.cvc.edu/

#### Cal-Poly

Forestry and Natural Resources Management is housed in the Department of Natural Resources Management within the <u>College of Agriculture</u>. Our program is accredited by the <u>Society of American Foresters</u> and is the largest undergraduate forestry program in the West.

The Forestry and Natural Resources major will prepare you for and important role in conservation and management of our forested ecosystems and related natural resources. You will qualify for such positions as forester, environmental interpreter, urban forester, environmental specialist, park administrator, resource manager, park ranger, resource planner, watershed manager, fire management specialist and forest hydrologist.

The Forestry and Natural Resources major provides various <u>concentrations</u> leading to a Bachelor of Science degree in Forestry and Natural Resources.

#### FNRCOURSES SCHEDULED TO BE TAUGHT IN 2004 - 2005

Course No. Title Units Quarter

- F N R 112 Outdoor Recreation 3
- F N R 140 Career Development & Planning in NRM 1 F W
- F N R 201 Intro. Forest Ecosystem Management 3 F S
- F N R 202 Environmental Management 3 As needed
- F N R 203 Resource Law Enforcement 3 W
- FNR 204 Resource Fire Control 2 S
- FNR 208 Dendrology 4 FWS
- F N R 215 Land and Resource Measurements 1 F W
- F N R 220 Forest Resources Enterprise Project 2 F W S Su
- FNR 247 Forest Surveying 2 FW
- F N R 260 Harvesting and Forest Utilization 3 W
- F N R 290 Intercollegiate Forestry Activities 1 F W S
- F N R 300 Computer Appl. in Resource Mgm't 2 As needed
- F N R 306 Natural Resource Ecology and Habitat Mgmt. 4 F W S
- F N R 307 Fire Ecology 3 S
- FNR 308 Fire & Society 4 W
- F N R 311 Environmental Interpretation 4 F
- F N R 312 Technology of Wildland Fire Management 4 S
- F N R 315 Measurements and Sampling in Forested Environments 4 F W
- F N R 317 The World of Spatial Data & Geographic Info.Tech. 4 W
- F N R 318 GIS Appl. of Natural Res. Info. 3 F W S
- F N R 319 Natural Resource Ecology, Theories & Applications 4 S
- F N R 321 Water Systems Technology Issues & Impacts 4 W
- F N R 323 Conflict Management in Natural Resources 4 F W
- F N R 326 Natural Resources Economics & Valuation 4 F
- F N R 335 Conflict Management in Natural Resources 4 S
- F N R 339 Internship in Forest & Natural Resources 2-12 F W S Su

- F N R 340 Resource Fire Management 2 F
- FNR 350 Urban Forestry 3 F
- F N R 355 Oak Woodland & Woodlot Management 4 As needed
- F N R 360 Ethnicity and the Land 3 F
- F N R 362 Survey & Mgm't of Mediterranean Eco. 4 As needed
- FNR 365 Silviculture & Vegetation Management 3 S
- F N R 400 Special Problems for Adv. Undergrad 2-4 F W S Su
- FNR 402 Forest Health 4 F
- F N R 404 Environmental Law (also CRP 404) 3 W
- F N R 408 Water Resource Law and Policy 3
- F N R 410 Resource Recreation Management 4
- F N R 412 FNR Senior Assessment Project 3 F
- F N R 414 Sustainable Forest Management 4 W
- F N R 416 Environmental Impact Analysis & Mgmt. 4 F S
- F N R 417 Resource Recreation Planning 3 S
- F N R 418 Applied GIS (Replaces FNR 460 & FNR 464) 3 W
- F N R 419 Watershed Management & Restoration 4 F W S
- F N R 420 Advanced Watershed Hydrology 4 S
- F N R 425 Applied Resource Analysis 4 W
- F N R 434 Wood Properties and Products 4 As needed
- F N R 435 Natural Resources Policy Analysis 4 S
- F N R 450 Community Forestry 3 W
- F N R 455 Urban-Wildland Interface Fire Protection 3 W
- FNR 461 Senior Project 3 FW S Su
- F N R 465 Ecosystem Management 4 S
- FNR 470 Selected Advanced Topics 3 FWS
- F N R 471 Selected Advanced Topics Laboratory 1 F W S
- F N R 472 Leadership Practice in FNR 1 S
- FNR 500 Individual Study 1 FWS Su
- F N R 502 Resource Conservation 3 W
- F N R 503 Tropical Forest Ecology 3 As needed
- F N R 504 Agroforestry 2 As needed
- F N R 521 Natural Resources Mgmt. for Educators 3 As needed
- F N R 530 Social Systems and Forest Resource Management 3 F
- F N R 532 Forestry Applications in Biometrics and Econometrics 4 S
- F N R 534 Forest Ecosystem Management and Modeling 3
- F N R 570 Selected Topics in Forest Resources 3 F W S Su
- F N R 571 Selected Topics in Forest Resources Lab 1 F W S Su
- F N R 575 Appl in Adv Watershed Hydrology 2 As needed
- F N R 581 Graduate Seminar in Forest Resources 3 W
- FNR 599 Thesis 1-9 FW SSu

Legend: F=Fall; WRevised 7/21/04=Winter; S=Spring; Su=Summer Quarter

This schedule is subject to change without notice. You must see your advisor each quarter before registration.

#### Berkeley, UC Davis

#### http://www.cnr.berkeley.edu/site/index.php

#### **University of California: Extension Online Courses:**

XB160AC American Environmental and Cultural History

4 semester unit(s) in Environmental Science, Policy and Management <a href="http://cord.berkeley.edu/UCEXT/courseview.asp?secid=415&value=related&action=Internet">http://cord.berkeley.edu/UCEXT/courseview.asp?secid=415&value=related&action=Internet</a>

#### XB10 Environmental Issues

Resource Management

4 semester unit(s) in Environmental Science, Policy and Management
<a href="http://cord.berkeley.edu/UCEXT/courseview.asp?secid=415&value=related&action">http://cord.berkeley.edu/UCEXT/courseview.asp?secid=415&value=related&action</a>
=Internet

Cal Berkeley <a href="http://www.cnr.berkeley.edu/site/index.php">http://www.cnr.berkeley.edu/site/index.php</a>

The College of Natural Resources - Our students and faculty address today's challenging environmental and social issues. CNR's academic programs and majors provide graduates with the scientific tools to foster both economic and ecological sustainability of the Earth's natural resources. We welcome you to our website and invite you to explore all of our exciting programs. Examples include:

Conservation and Resource Studies

Environmental Economics and Policy

Environmental Sciences

Forestry

Genetics and Plant Biology

Microbial Biology

Molecular Environmental Biology

Molecular Toxicology

Nutritional Sciences

Humboldt State University > http://www.humboldt.edu/~cnrs/

#### **Degree Programs**

The College of Natural Resources and Sciences offers a robust selection of degree options for both undergraduate and graduate students alike to choose from. Below is a list of the degree programs offered.

BA = Bachelor's of Art

**BS** = Bachelor's of Science

MA = Master's of Art

MS = Master's of Science

Aimed at students seeking positions at advanced managerial levels in agencies and corporations responsible for managing natural resources. Contact the Department of Environmental and Natural Resource Sciences, (707) 826-4147.

#### Colorado

Colorado State Continuing Education: <a href="http://www.learn.colostate.edu/csun/ddp/">http://www.learn.colostate.edu/csun/ddp/</a>
Natural Resources and the Environment Certificate – 11-12 Credits can be earned through this Distance Learning Program. Masters of Rangeland Ecosystem Science, Fire Science Management. Environmental Management and Assessment.

#### **University of Denver**

The University of Denver offers online Master of Environmental Policy and Management degree programs with concentrations in:

- Environmental Management
- Environmental Information Management
- Environmental, Health and Safety Management
- Natural Resource Management
- Environmental Project Management
- Environmental Policy Concentration

Certificates of Advanced Study are also available online. Accredited by the North Central Association of Colleges and Schools.

#### Florida

#### **University of Florida**

The University of Florida offers a Master of Agriculture via distance learning technologies. Courses are delivered via interactive videoconferencing, videotape lecturing, and online.

#### Idaho

University of Idaho offers a Masters of Natural Resources that can be taken entirely online. The 30 credit, non-thesis, professional program is an interdisciplinary degree focused on natural resource management and administration. It is designed for those already in the workplace who are unable to leave work or home to pursue an advanced degree. For further information, please contact their website, http://www.cnr.uidaho.edu/mnr/ or contact Cheri Cole cheric@uidaho.edu.

University of Idaho also offers FOR 526, Fire Ecology, online. For more information <a href="http://www.cnrhome.uidaho.edu/fwp/">http://www.cnrhome.uidaho.edu/fwp/</a> or <a href="http://www.cnr.uidaho.edu/fire\_ecology.htm">http://www.cnrhome.uidaho.edu/fwp/</a> or <a href="http://www.cnr.uidaho.edu/fire\_ecology.htm">http://www.cnr.uidaho.edu/fire\_ecology.htm</a>

#### Idaho State Universityhttp://www.isu.edu/

ISU offers College of Arts and Sciences (Biological Sciences) degrees in Biology and BS degrees in Biochemistry, Botany, Ecology, Microbiology, Clinical Laboratory Science, and Zoology. Undergraduate degree program: Bachelor of Science in Ecology.

ISU also offers a <u>Ph.D.</u> in Biological Science, <u>M.S.</u> degrees in Biology, <u>Clinical Laboratory Sciences</u> (new) and Microbiology, a <u>Doctor of Arts</u> degree and an <u>MNS</u> degree.

Boise State University offers undergraduate and graduate degrees in Biological Sciences. For more information, refer to http://www.boisestate.edu/biology/BSBiology.htm

#### Iowa

#### **Iowa State University**

Iowa State University offers the following degree programs in agriculture:

#### Master of Agriculture

The core 13 credits of the program emphasize leadership development, technological change, use of statistics, economic issues, and sustainability issues. You select the remaining courses, 14 credits, in consultation with your graduate committee to meet your individual needs and interests. The capstone of the program is a creative component of 4 credits that lets you explore a particular interest area. The creative component is a demonstration of independent creativity with a written report of laboratory, field, or library research.

#### • Master of Science in Agronomy

The computer-based program emphasizes practical, professional, and technical skills involved in crop management, soil and water management, and integrated pest management. It is a non-thesis degree.

Programs are delivered statewide via the Iowa Communications Network; and in the U.S. and Canada via CD-ROM and internet. Accredited by the North Central Association of Colleges and Schools.

#### Kansas

#### **Kansas State University**

Kansas State University offers the following online degrees:

#### • Master of Agribusiness

The Master in Agribusiness at Kansas State University provides agribusiness professionals the knowledge and skills to excel in today's rapidly changing and increasingly complex food and agricultural global economy. Two one-week segments per year on-campus visits required.

• Bachelor Degree Completion Program - Animal Science and Industry
The program builds on a liberal arts foundation with a concentration in animal science and includes substantial coursework in agriculture, biological and physical sciences, mathematics, statistics and computer science, business and economics.

Kansas State University is accredited by the Northwest Association of Colleges and Schools.

#### Montana

University of Montana, Missoula offers courses and degrees at http://www.forestry.umt.edu/

Distance learning courses:

http://www.umt.edu/ce/deo/extended/default.asp:

Montana State University, Bozeman, Montana <a href="http://www.montana.edu/www.cat/courses/lres.html">http://www.montana.edu/www.cat/courses/lres.html</a>

Non-degree graduate students are those who have earned baccalaureate degrees and do not wish to pursue graduate programs leading to an advanced degree at MSU but wish to take courses.

#### Nebraska

#### **University of Nebraska - Lincoln**

The University of Nebraska - Lincoln offers a Master of Agriculture degree through distance education technologies for working agricultural professionals. Students are able to individualize their particular curriculum programs to best meet their own career objectives. Accredited by the North Central Association of Colleges and Schools.

#### **New Mexico State University (Las Cruces, NM)**

#### http://www.cahe.nmsu.edu/academics/degrees.html

Undergraduate students choose from a wide variety of majors in the agricultural life sciences, natural resources, social and consumer sciences, business and education. Master's degrees are offered in each academic department, and doctoral programs are offered in agronomy, animal science, and range science.

#### Oklahoma

#### **Online College of Oklahoma**

Online degrees in agriculture offered by Oklahoma State University:

- Master of Agricultural Education
- Master of Agriculture

Delivery methods incorporate interactive video, telecourses, Internet, audioconferencing, computer assisted instruction and audiotape.

#### Oregon State University http://ecampus.oregonstate.edu/online-degrees/default.htm

Oregon State University offers the following online environmental science degree completion programs:

- B.S. Environmental Sciences
- B.S. Natural Resources
- Environmental Sciences Minor
- Natural Resources Minor

Courses offered through OSU Distance & Continuing Education have been redesigned for delivery to students learning from a distance via the Web, video, interactive television, and Individualized Directed Learning. Accredited by the Northwest Association of Schools and Colleges.

# Undergraduate Degrees Online General Agriculture Environmental Sciences Natural Resources

College of Forestry: http://www.cof.orst.edu/cof/fr/courses.php

#### Forest Resources course webpages:

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FOR 111 - Introduction to Forestry

FOR 112 - Introduction to Computers and the Internet

FOR 141 - Tree and Shrub Identification

FOR 220 - Aerial Photo Interpretation and Forest Measurements

FOR 240 - Forest Biology

FOR 241 - Dendrology / Dichotomous Key to Trees of the Pacific Northwest

FOR 251 - Recreation Resource Management
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FOR 281X - Understanding Place Communities and Their Landscapes
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FOR 321- Forest Mensuration

FOR 323 - Recreation Research Methods

FOR 330 - Forest Economics I

FOR 341 - Forest Ecology

FOR 352 - Wilderness Management

FOR 353 - Field School

<u>FOR 365</u> - Issues in Natural Resources Conservation (Distance Education course; taught via web & videos)

FOR 381X - Community-based Conservation and Development

FOR 382X - Human Influence on Disturbance Ecosystems

FOR 390 - Forestry for Teachers

FOR 391 - Natural Resource Communications

FOR 407/507-006 - Starker Lecture Series (formerly FOR 406/506)

FOR 420/520 - Advanced Aerial Photos and Remote Sensing

FOR 421/521 - Advanced GIS Applications in Forestry

FOR 432/532- Economics of Recreation Resources

FOR 441- Silviculture Principles

FOR 442/542 - Silviculture/Forest Regeneration

FOR 444 - Ecological Aspects of Park Management

FOR 445 - Ecological Restoration (Distance Education)

FOR 446 - Wildland Fire Ecology (Distance Education)

FOR 451/551 - History and Cultural Aspects of Recreation

FOR 456 - International Forestry

FOR 457/557 - Techniques for Forest Resource Analysis

FOR 460 - Forest Policy

FOR 495/595 - Interpretive Projects

FOR 564 - Private Forests in Society

#### **Texas**

#### Texas A&M University

Texas A&M University offers the following online agriculture degree program:

#### Master of Agriculture

The degree program is intended to prepare individuals for leadership roles in education, natural resource management, the extension service, and many professional careers in agriculture and life sciences. This is a non-thesis degree program which emphasizes the development of problem-solving skills and the practical aspects of academic coursework. A highly individualized degree, you can select degree plans in the following areas:

- Agricultural Development
- Fisheries
- Plant Sciences
- Natural Resources Development
- Poultry Sciences
- Wildlife

Delivery methods include Internet, videoconferencing and CD-ROM. There are no residency requirements. Accredited by the Southern Association of Colleges and Schools.

#### **Texas Tech University**

Texas Tech University and Texas A&M University offer a joint Doctor of Education in Agricultural Education. Courses are taught using the Trans-Texas Videoconference Network, a web-based design using WebCT, the Internet, and a variety of other methods, including appropriate face-to-face meetings. Texas Tech University is accredited by the Southern Association of Colleges and Schools.

#### Washington

Washington State University offers Bachelor of Science in Agriculture as well as Natural Sciences courses for non-degree seeking students. <a href="http://www.distance.wsu.edu/">http://www.distance.wsu.edu/</a> Washington State University

Washington State University offers the following online degree programs in agriculture:

#### • Master of Science in Agriculture

Emphasis of the Master of Science in Agriculture program is on the agricultural professional, practitioner, and educator.

#### • Bachelor of Science in Agriculture

The Bachelor of Science in Agriculture is an upper-division degree completion program that enables students to complete the final two years of a bachelor's degree without going to a Washington State University campus.